

Title (en)

Lightweight high power electromagnetic transducer.

Title (de)

Leichtgewichtiger elektromagnetischer Hochleistungsumwandler.

Title (fr)

Transducteur électromagnétique allégé de forte puissance.

Publication

**EP 0230639 A2 19870805 (EN)**

Application

**EP 86117875 A 19861222**

Priority

US 81230685 A 19851223

Abstract (en)

An electromagnetic transducer is disclosed that is lightweight and has a high power to weight ratio, with the transducer being capable of operation as an efficient motor, alternator or generator, and being particularly useful, for example, in connection with self-propelled vehicle applications such as passenger cars. The electromagnetic transducer can utilize a shell construction, which enhances heat removal, and includes a magnetic-flux producing assembly, having a plurality of spaced magnetic elements, and an armature assembly formed by a winding arrangement of dispersed conductive elements which are separated by flux carrying elements which, to the extent that such flux carrying elements are electrically conductive, are dispersed in one, two, or three dimensions to thus be dispersed-phase flux carrying elements. The armature conductors and flux carrying elements are dispersed to avoid creating opposing induced currents, or eddy currents, depending on the effect produced on transducer operation. This dispersal enables operation of the transducer at high efficiency with high torque being maintained even during high speed relative motion between the magnetic flux producing assembly and the armature with the combination of high torque and high speed producing higher power per unit weight than can now known devices.

IPC 1-7

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IPC 8 full level

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